

Feeder Distribution Interface Cost Table

Fdi Cost per Line	
Size	Total Cost
0	\$407.00
26	\$1,885.00
51	\$2,120.00
101	\$2,355.00
151	\$2,590.00
201	\$5,509.49
301	\$6,848.35
451	\$7,586.00
601	\$8,717.30
901	\$11,489.93
1351	\$11,712.81
1801	\$17,222.30
2101	\$18,561.16
2251	\$19,298.81
2401	\$20,430.11
2701	\$23,202.74
3150	\$23,425.62

The FDI is the interface between copper feeder cables and copper distribution cables. FDI's are standard cross-connect boxes available today. The smaller sizes 0 to 200 (up to 200 in and 200 out) are pedestal mounted B-Boxes and sizes from 201 to 1800 in and 201 to 1800 out (3600) are standard serving area interface cabinets also available today. Size is based on the total of the distribution cable sizes leaving the FDI. For example, if the total of the distribution cable sizes is 1800 pair than a 3600 pair FDI is placed at \$11,712.81. The largest interface assumed is a 3600 pair (1800 in and 1800 out). Beyond that size then two separate interfaces are assumed and costs have been adjusted to account for multiple placements at same location.

Digital Loop Carrier (DLC) Investments**Digital Carrier Cost Table**

Cost for DIGITAL LOOP CARRIER equipment		
Dlc Fiber Size	Fixed Cost	Per Line Cost
0	\$38,867.00	\$92.81
49	\$53,577.00	\$92.81
121	\$84,976.00	\$92.81
241	\$92,147.00	\$92.81
673	\$125,120.85	\$92.81
1335	\$217,267.85	\$92.81

Sizes of DLC systems in the BCPM range from 48 to 2016 channels. This will provide the flexibility and the economics of deploying sizes based on density and growth. DLC systems are fiber-fed integrated systems and eliminate many of the costs associated with standard or "universal" systems. Fixed cost assumes all installed first costs associated with the placement of DLC systems at both the remote terminal and the central office. The fixed cost includes common equipment, site preparation, right-of-way cost, remote cabinets, commercial power, protection, central office fiber optic terminal (FOT/COT) etc. The Per Line Cost or variable cost is the installed cost of line cards on a per line basis (installed cost of line cards divided by 4 services per line card at the Remote Terminal plus the installed cost of the central office line card (DS1 card) divided by 24 services per card. The default values are average costs reported by the participating LECs then smoothed by removing outliers (very low and very high cost).

Distribution Plant Mix Table

Distribution UG/Aerial Mix Table			
Density	UnderGround %	Buried %	Aerial %
0	10.00%	80.00%	10.00%
11	15.00%	77.00%	8.00%
51	20.00%	74.00%	6.00%
151	25.00%	70.00%	5.00%
501	30.00%	67.00%	3.00%
2001	60.00%	40.00%	0.00%
5001	95.00%	5.00%	0.00%

Copper Plant Mix Table

Copper Feeder UG/Aerial Mix Table			
Density	UnderGround %	Buried %	Aerial%
0	10.00%	80.00%	10.00%
11	15.00%	77.00%	8.00%
51	20.00%	74.00%	6.00%
151	25.00%	70.00%	5.00%
501	75.00%	22.00%	3.00%
2001	85.00%	15.00%	0.00%
5001	95.00%	5.00%	0.00%

Fiber Plant Mix Table

Fiber Feeder UG/Aerial Mix Table			
Density	UnderGround %	Buried %	Aerial%
0	10.00%	80.00%	10.00%
11	15.00%	77.00%	8.00%
51	20.00%	74.00%	6.00%
151	25.00%	70.00%	5.00%
501	75.00%	22.00%	3.00%
2001	85.00%	15.00%	0.00%
5001	95.00%	5.00%	0.00%

The plant type mix for distribution copper, feeder copper, and fiber feeder is based on a forward look as to the type of plant expected to be placed in each density zone. It is expected that less aerial plant will be placed in a forward look due to high first costs, high maintenance costs, and local ordinances requiring out of sight facilities.

Density Fill Table

Density	Feeder	Distribution
0	75.00%	40.00%
11	80.00%	45.00%
51	80.00%	55.00%
151	85.00%	65.00%
501	85.00%	75.00%
2001	85.00%	80.00%
5001	85.00%	80.00%

The fill factors reflect an optimal fill that would be expected for a cable serving a known number of subscribers with little, if any, growth. There is some excess capacity for administration and breakage. The less dense areas reflect a somewhat lower fill due to travel and the higher expected cost of re-enforcement as the predominant type of plant is buried. Distribution fills are lower than feeder due to the amount of buried plant and the risk of re-enforcement where established landscaping is the rule.

DensityHhTable

Density	% Single Family	Household per Multi Unit Dwelling	% Multi Family Dwellings
0	96.00%	2.80	4.00%
11	93.90%	3.20	6.10%
51	89.00%	4.50	11.00%
151	83.40%	5.20	16.60%
501	74.20%	5.70	25.80%
2001	59.40%	5.90	40.60%
5001	22.00%	7.10	78.00%

This table determines the mix of single family and multi-family dwelling units by density group. The Table also contains the average number of units in each multi-family dwelling unit by density group. The default values were derived from the census bureau national survey of housing characteristics. This table is used to determine an accurate size and mix of drop, nid, and terminal investments.

Structure Allocation Table

Cable Size	Cable Structure %	Fiber Structure %
0	50.00%	50.00%
200	50.00%	50.00%
900	50.00%	50.00%
2400	50.00%	50.00%
4200	50.00%	50.00%
>4200	75.00%	25.00%

This table determines the allocation of structure costs (trench, poles) between copper and fiber facilities when both are present.

Voice Grade Ratio Table

# switched lines in CBG	% switched to VG	% switched to DS1	% special to VG	% special to DS1
0	100.00%	0.00%	100.00%	0.00%
2,016	65.00%	35.00%	50.00%	50.00%
10,000	50.00%	50.00%	30.00%	70.00%
20,000	75.00%	25.00%	10.00%	90.00%

This table is used to determine the percent of switched voice grade lines that are terminated in a CBG at a digital PBX via DS1 facilities. This table also is used to determine the percent of private line voice grade channels that are terminated at the DS1 level at the customer premise.

Structure Costs

Density Group 0-10	Density Group 0-10		
	Underground Normal		
	Install	Feeder	Distribution

Conduit Installation	Cost per Unit	% of Activity	% Assigned Telephone	Weighted Amount	% of Activity	% Assigned Telephone	Weighted Amount
Trench & Backfill	\$ 2.27	75.00%	100.00%	\$1.70	87.00%	100.00%	\$1.97
Rocky Trench	\$ 4.22	0.00%	100.00%	\$0.00	0.00%	100.00%	\$0.00
Backhoe Trench	\$ 2.70	17.00%	100.00%	\$0.46	5.00%	100.00%	\$0.14
Hand Dig Trench	\$ 4.99	2.00%	100.00%	\$0.10	2.00%	100.00%	\$0.10
Boring	\$ 11.80	2.00%	100.00%	\$0.24	2.00%	100.00%	\$0.24
Cut & Restore Asphalt	\$ 8.72	1.00%	100.00%	\$0.09	1.00%	100.00%	\$0.09
Cut & Restore Concrete	\$ 9.63	1.00%	100.00%	\$0.10	1.00%	100.00%	\$0.10
Cut & Restore Sod	\$ 3.75	2.00%	100.00%	\$0.08	2.00%	100.00%	\$0.08
Total Underground Cost per Foot		100.00%		\$2.76	100.00%		\$2.70

Buried Normal							
Buried Cable Installation	Install	Feeder			Distribution		
	Cost	% of Activity	% Assigned Telephone	Weighted Amount	% of Activity	% Assigned Telephone	Weighted Amount
Plow	\$ 1.14	96.00%	100.00%	\$ 1.09	86.00%	100.00%	\$ 0.98
Rocky Plow	\$ 1.37	0.00%	100.00%	\$ 0.00	0.00%	100.00%	\$ 0.00
Trench & Backfill	\$ 2.27	0.00%	100.00%	\$ 0.00	10.00%	100.00%	\$ 0.23
Rocky Trench	\$ 4.22	0.00%	100.00%	\$ 0.00	0.00%	100.00%	\$ 0.00
Backhoe Trench	\$ 2.70	0.00%	100.00%	\$ 0.00	0.00%	100.00%	\$ 0.00
Hand Dig Trench	\$ 4.99	0.00%	100.00%	\$ 0.00	0.00%	100.00%	\$ 0.00
Bore Cable	\$ 11.80	0.00%	100.00%	\$ 0.00	0.00%	100.00%	\$ 0.00
Push Pipe & Pull Cable	\$ 6.80	0.00%	100.00%	\$ 0.00	0.00%	100.00%	\$ 0.00
Cut & Restore Asphalt	\$ 8.72	1.00%	100.00%	\$ 0.09	1.00%	100.00%	\$ 0.09
Cut & Restore Concrete	\$ 9.63	1.00%	100.00%	\$ 0.10	1.00%	100.00%	\$ 0.10
Cut & Restore Sod	\$ 3.75	2.00%	100.00%	\$ 0.08	2.00%	100.00%	\$ 0.08
Total Buried Cost per Foot		100.00%		\$ 1.35	100.00%		\$ 1.47

Aerial Normal							
Aerial Cable Installation	Cost	Feeder			Distribution		
		Installation Cost per Unit	% of Sharing	Weighted Amount	Installation Cost per Unit	% of Sharing	Weighted Amount
Poles	\$ 68.17	\$ 358.58	50.00%	\$ 363.38	\$ 358.58	50.00%	\$ 363.38
Anchors and Guys	\$ 68.00	\$ 255.00	100.00%	\$ 53.83	\$ 255.00	100.00%	\$ 53.83
Total Aerial Cost per Pole				\$ 417.21			\$ 417.21

Structure type and costs vary by type of facilities (aerial, buried, or underground), density, and soil conditions (Normal, Soft Rock, and Hard Rock). Trench cost for both conduit and buried cable is averaged from the forward looking cost data received from data requests. LECs provided data for the cost of different types of trenching done in each of the density zones and for the different types of soil conditions. This information was weighted and averaged for the trenching default cost in the BCPM. Sharing of trench is assumed in both feeder and distribution but the amount of sharing differs by density and feeder/distribution. It would be extremely rare that LECs would share trench in feeder conduit system or in rural areas where other service providers choose not to serve. The poles placed in the BCPM are 45' class 5 poles, purchased and placed by the telephone company. Sharing is considered with poles but not anchors and guys as they are placed per messenger. Anchors and guys are assumed to occur every 1000 feet so their costs are calculated on a per foot basis then added to the cost of poles.

Conduit Manhole Table

Duct capacity	Per Unit	Installation Cost Per Unit
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in manhole	Unit	Material Cost	Normal	Soft Rock	Hard Rock
0	Hand Hole	\$ 944.00	\$ 400.00	\$ 600.00	\$ 800.00
3	4X Manhole	\$ 2,138.25	\$ 1,645.00	\$ 2,045.00	\$ 2,445.00
5	9X Manhole	\$ 3,209.00	\$ 2,431.00	\$ 2,831.00	\$ 3,231.00
99	9X Adder	\$ 2,800.00	\$ 500.00	\$ 700.00	\$ 900.00
n/a	Conduit per duct foot	\$0.83	NA	NA	NA

Conduit Manhole Table (Continued)

% Assigned Telephone	Cost of installed facility assigned telephone		
	Normal	Soft Rock	Hard Rock
100%	\$ 1,344.00	\$ 1,544.00	\$ 1,744.00
100%	\$ 3,783.25	\$ 4,183.25	\$ 4,583.25
100%	\$ 5,640.00	\$ 6,040.00	\$ 6,440.00
100%	\$ 3,300.00	\$ 3,500.00	\$ 3,700.00
100.00%	\$ 0.83	NA	NA

Sizing of conduit and manholes are based on the required amount of facilities required for telephony. No additional capacity has been added for sharing. For example, if a placement of 3 copper cables are required then 3 ducts are placed for the cables and one duct is placed for maintenance. In this case, a pre-cast manhole (PTS-65) is placed with 4 ducts. Manhole costs and duct cost per foot was averaged from the data provided by participating LECs.

Spacing Table

In Feet				
Density	Manhole Spacing	Pole Spacing	Guy Spacing	Relative Pole Units
0	725	250	1500	6.00
11	725	250	1500	6.00
51	725	250	1500	6.00
151	725	250	1500	6.00
501	550	150	1000	6.67
2001	550	150	500	3.33
5001	550	150	500	3.33

Manhole and pole spacing defaults are established by averaging the spacing data provided by the LECs. Denser areas (above 501 households per square mile) require shorter spacing due to larger cables and demand. Larger cables, due to their weight, will sag more in midspan between poles and increase pulling tension for pulls between manholes.

Miscellaneous Inputs

Cable & Wire Inputs

Description

NormalUGDepth	24.00	Normal Placement Depth in inches for Buried/Underground Copper Cable
NormalFiberDepth	36.00	Normal Placement Depth in inches for Buried/Underground Fiber
MaxFiberSize	288	Maximum Fiber Cable Size
MaxFeederSize	4,200	Maximum Copper Feeder Cable Size
Max DistSize	3,600	Maximum Copper Distribution Cable Size
CprMaxDistr	12,000	Maximum length of copper cable in the CBG distribution area

	0.00%	Fiber Cable Discount %
	0.00%	Copper Cable Discount %
DropCostPerFoot	\$0.77	Drop Cost per Foot Material & Installation
PedestalCost	\$0.00	Cost of Pedestal included in Drop Terminal Cost
NidCost	\$30.73	Unit Cost per Network Interface Device Including Installation
	12,000	Cable Break Point

Cable and wire inputs set the parameters for cable placement depth, cable maximum sizes and the amount of discount applied to cable. To set the default values for Drop and NID, the data responses provided by the participating LECs was averaged to determine a national average installed cost for each. The travel and installation labor hours are adjusted to account for installing more than one unit per trip per 8 hour workday. Fiber and copper default discounts are set as 0% as discounts are already applied to the data received from LECs. To apply additional discounts to cable in this table, a user should adjust the total amount of the discount to account for the inclusion of labor in the cable cost tables. The default value for the Cable Break Point is set at 12,000 feet total loop distance (wire center to subscriber). However, breakpoints ranging from 6000 feet to 18,000 feet are available on the pull down menu for users to set their own or for sensitivity analysis. The 12,000 foot default is designed to allow for provisioning of services up to and including DS1. To extend the breakpoint, a user must adjust cable cost to account for additional provisioning cost (load coils, repeaters, etc. depending on service) and gauge changes in cables in the feeder and distribution.

Terrain Inputs and Surface Impacts

CriticalWaterDepth	3	Depth in feet at which water impacts placement costs
WaterFactor	30.00%	% Cost increase for presence of water within critical depth
NewTerrainTrigger	5	Value that triggers new terrain variable multiplier
NewTerrainFactor	1	Cost multiplier when new terrain variable exceeds trigger point
MinSlopeTrigger	12	Point at which minimum slope effects placement distance
MinSlopeFactor	1.100	Change in distance due to increased average slope
MaxSlopeTrigger	30	Point where presence of very high slope causes yet more cable distance
MaxSlopeFactor	1.0500	Change in distance due to a maximum only slope presence
CombSlopeFactor	1.200	Secondary change in distance due to substantial slope presence

Slope Triggers are set at the percent slope when facilities must be placed along the contours of the hillside rather than in a point-to-point placement. The Slope Factors are the multipliers used to add the additional distance that the facilities must travel as they wind their way across the higher slope terrain. Three different Slope Triggers are used to adjust distance: 1) the minimum slope trigger: when the average minimum slope in the CBG exceeds 12 degrees (default) then distance is adjusted by this minimum slope factor, 2) the maximum slope trigger: when the average maximum slope in the CBG exceeds 30 degrees (defaults) the distance is adjusted by this maximum slope factor, 3) the combined slope trigger: when both the minimum and maximum slope triggers are exceeded the distance is adjusted by the combined slope factor.

Digital Carrier Inputs

OpticsCost	\$75,000	Average Cost for each DS-3 for CO and field DS3 to DS1 multiplexers
CopperT1	\$2,500	Average Cost per DS-1 on copper (both terminals & repeater)
ElectronicFill	85.00%	Fill Factors for Electronics
HiCapFill	95.00%	Fill Factors for High Capacity Optic Multiplexers
	0.00%	AFC Electronics Discount %
	0.00%	SLC Electronics Discount %

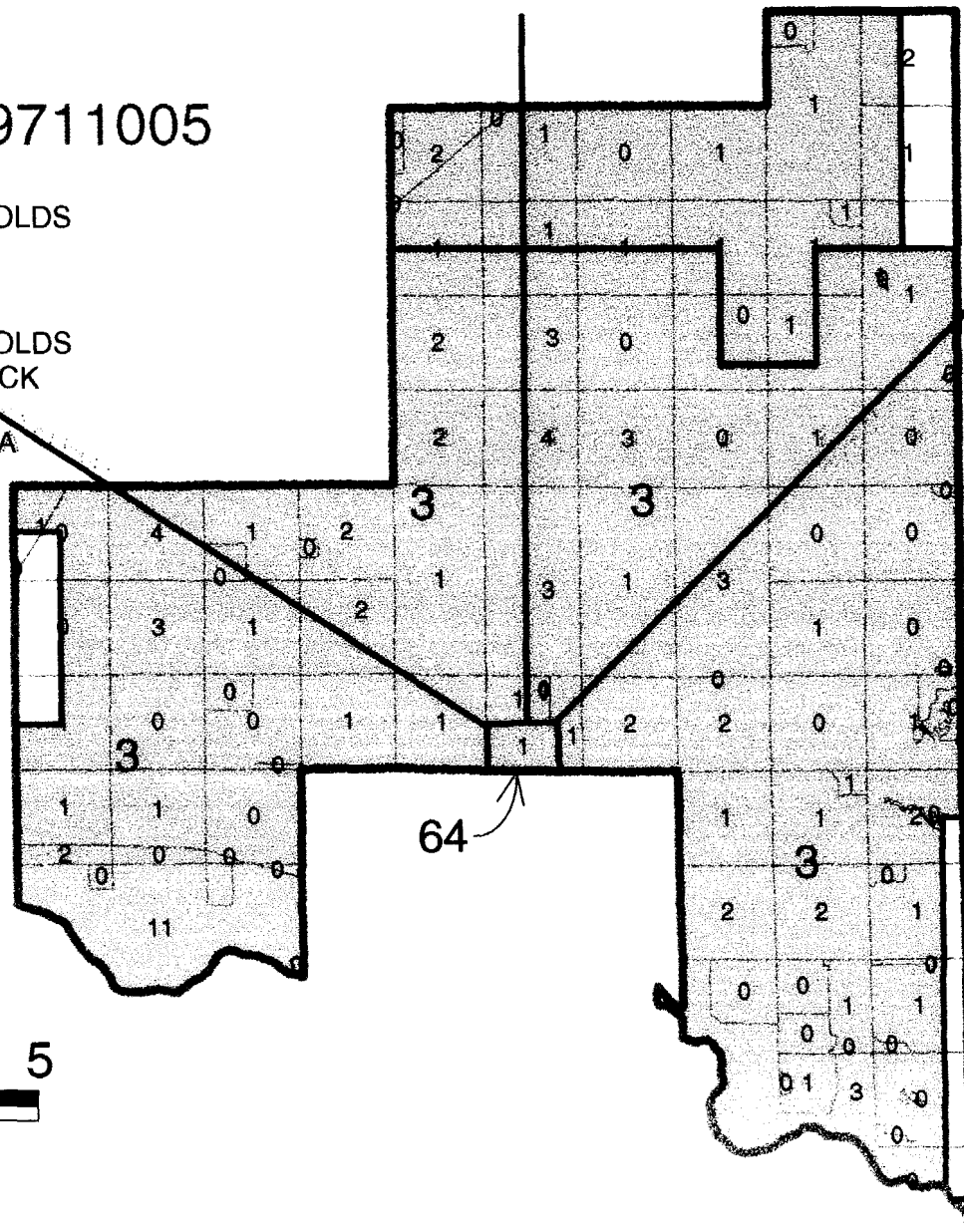
This table provides the cost of electronics for terminating private line and digital PBX services at the DS1 signal level. The table also includes the fill factors that applies to the line cards in the channel units.

CBG 200099711005

3 NUMBER OF HOUSEHOLDS HATFIELD

1 NUMBER OF HOUSEHOLDS
IN EACH CENSUS BLOCK

SPRINT SERVING AREA



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